

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1 1. (original) A communication system for transporting Internet protocol-
2 formatted communications over a Universal Mobile Telecommunications System (UMTS)
3 wireless communications system, the communication system including a base station and
4 a radio network controller, the communication system further comprising:

5 an inter-working gateway adapted for interconnection to the radio network
6 controller and the base station, the inter-working gateway being adapted to communicate
7 via Internet transport protocols and UMTS-based transport protocols, the inter-working
8 gateway being further adapted to reformat communications with movable UMTS-based
9 radio-controlled network layer protocols for transport to the radio network controller and
10 to reformat communications with movable Internet radio-controlled network layer
11 protocols for transport to the base station.

1 2. (original) The communications system as recited in claim 1, wherein the
2 UMTS communications system exists at an installed site.

1 3. (original) The communications system as recited in claim 1, wherein the
2 inter-working gateway is supplied as pre-installed with the transport protocols.

1 4. (original) The communications system as recited in claim 1, wherein the
2 inter-working gateway is adapted to receive and download the radio-controlled network
3 layer protocols and the transport protocols from the base station.

1 5. (original) The communications system as recited in claim 1, wherein the
2 base station and the inter-working gateway are interconnected in a local area network.

1 6. (original) The communications system as recited in claim 1, further
2 comprising:

3 an SDRAM memory;

4 one or more channel elements, each comprising a digital signal processor and
5 associated flash memory and an application specific integrated circuit to manage
6 baseband processing; and

7 a microprocessor for configuring each channel element, storing user data in the
8 SDRAM memory, and exchanging user data with the digital signal processor.

1 7. (original) The communications system as recited in claim 1, wherein an
2 interconnection of the inter-working gateway with the base station carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction.

1 8. (original) The communications system as recited in claim 1, wherein an
2 interconnection of the inter-working gateway with the radio network controller carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction.

1 9. (original) The communications system as recited in claim 1, wherein
2 an interconnection of the inter-working gateway with the base station carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction, and

6 an interconnection of the inter-working gateway with the radio network controller
7 carries the communications reformatted with the movable UMTS-based radio-controlled
8 network layer protocols in a first direction, and the communications formatted with the
9 movable Internet radio-controlled network layer protocols in a second direction.

1 10. (original) The communications system as recited in claim 1, further
2 comprising:

3 a Node-B base station adapted for transmitting and receiving cellular telephone
4 communications, the Node-B base station being interconnected with the radio network
5 controller for exchanging wireless cellular telephone communications.

1 11. (original) The communications system as recited in claim 10, wherein the
2 UMTS communications system exists at an installed site.

1 12. (original) The communications system as recited in claim 10, wherein the
2 inter-working gateway is supplied as pre-installed with the transport protocols.

1 13. (original) The communications system as recited in claim 10, wherein the
2 inter-working gateway is adapted to receive and download the radio-controlled network
3 layer protocols and the transport protocols from the base station.

1 14. (original) The communications system as recited in claim 10, wherein the
2 base station and the inter-working gateway are interconnected in a local area network.

1 15. (original) The communications system as recited in claim 10, further
2 comprising:

3 an SDRAM memory;

4 one or more channel elements each comprising, a digital signal processor and
5 associated flash memory and an application specific integrated circuit to manage
6 baseband processing; and

7 a microprocessor for configuring each channel element, storing user data in the
8 SDRAM memory, exchanging user data with the digital signal processor, and processing
9 the movable protocols.

1 16. (original) The communications system as recited in claim 10, wherein an
2 interconnection of the inter-working gateway with the base station carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction.

1 17. (original) The communications system as recited in claim 10, wherein an
2 interconnection of the inter-working gateway with the radio network controller carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction.

1 18. (original) The communications system as recited in claim 10, wherein
2 an interconnection of the inter-working gateway with the base station carries the
3 communications reformatted with the movable UMTS-based radio-controlled network
4 layer protocols in a first direction, and the communications reformatted with the movable
5 Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

19. (original) An inter-working gateway for wirelessly transporting Internet protocol-formatted communications in a Universal Mobile Telecommunications System (UMTS) communications system, the inter-working gateway comprising:

means for communicating via Internet transport protocols and UMTS-based transport protocols;

means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller; and

means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway.

20. (withdrawn) A method for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the method comprising:

segmenting Internet-formatted communications into Internet framing protocol-protocol data units (FP-PDUs);

multiplexing the FP-PDUs over separate label switched paths via multiple protocol label switching (MPLS); and

exchanging the multiplexed FP-PDUs as formatted multiplexed MPLS data segments between a base station and a radio network controller.

21. (withdrawn) The method as recited in claim 20, further comprising:

installing radio-controlled network protocols in an inter-working gateway interconnected between the base station and the radio network controller.

22. (withdrawn) The method as recited in claim 20, further comprising:

segmenting the Internet-formatted communications into FP-PDUs of 350 octets maximum length.

23. (withdrawn) The method as recited in claim 20, further comprising:

formatting the FP-PDUs with UMTS radio-controlled network layer protocols for transport in the UMTS wireless communications system; and

4 formatting the FP-PDUs with Internet radio-controlled network layer protocols
5 for transmission as wireless Internet communications.

1 24. (withdrawn) The method as recited in claim 21, further comprising:
2 transporting the FP-PDUs formatted with UMTS radio-controlled network layer
3 protocols from the base station in a first direction; and
4 transporting the FP-PDUs formatted with Internet radio-controlled network layer
5 protocols in a second direction.

1 25. (currently amended) A method for transporting Internet protocol-
2 formatted communications over a Universal Mobile Telecommunications System (UMTS)
3 wireless communications system, the UMTS communication system including a base
4 station and a radio network controller, the ~~communication system~~ method comprising:

5 reformatting communications using movable UMTS-based radio-controlled
6 network layer protocols for transport between the base station and the radio network
7 controller; and

8 reformatting communications using movable Internet radio-controlled network
9 layer protocols for transport between the base station and the radio network controller.